

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of

Niro Nakamichi et al.

Serial No.: 08/760,706

Filed: December 5, 1996

For: DISK PLAYBACK DEVICE



RECEIVED

Group Art Unit: 2754 **APR 30 1998**

Examiner: A. Cao **Group 2700**

Atty. Dkt. No. M1653-109
(4076.73577)

SUPPLEMENTAL REISSUE DECLARATION

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

We, Niro NAKAMICHI and Yasuhiro NOGUCHI as joint inventors along with Makoto HARA, who refuses to join in the above-identified application for reissue of patent number 5,123,001 and whose last known address is 29-24, Nishi 2-chome, Kunitachi-shi, Tokyo, Japan, do individually and on behalf of Makoto HARA hereby declare that:

Our residences, post office addresses, and citizenship are stated below next to our respective names.

This Supplemental Declaration supplements the declaration we previously executed on February 22, 1996 and which was filed with the United States Patent and Trademark Office ("U.S.P.T.O."), and received by the U.S.P.T.O. mailroom on February 29, 1996.

Every error in U.S. Patent No. 5,123,001 which was corrected in the present reissue application, and is not covered by the prior declaration submitted in this application and executed

Reissue application - serial no. 08/760,706

February 22, 1996 arose without any deceptive intention on our part. At least one error set forth in the declaration executed February 22, 1996 is still being corrected in the instant reissue application.

We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

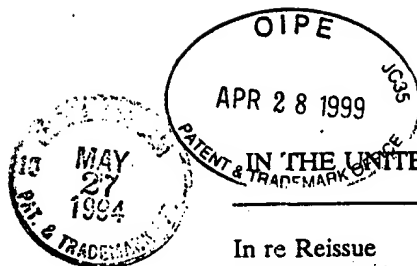
Signature *St. Nakamichi* Date *Apr/5/99*
Full Name of
Person Signing NAKAMICHI Niro
Family Name First Given Name Second Given Name

Residence Tokyo, JAPAN Citizenship JAPAN
Post Office
Address 2-16-11, Hikawadai Nerima, Tokyo, JAPAN

Signature *Yasuhiro Noguchi* Date April 14, 1999
Full Name of
Person Signing NOGUCHI Yasuhiro
Family Name First Given Name Second Given Name

Residence Tokorozawa, JAPAN Citizenship JAPAN
Post Office
Address 2876-25, Yayoi cho Tokorozawa, Saitama Pref., JAPAN

RECEIVED
APR 30 1998
Group 2700



M1653-8
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application of	:	Niro Nakamichi, Makoto Hara, and Yasuhiro Noguchi
Serial No.	:	Unknown
Filed	:	
For	:	DISK PLAYBACK DEVICE
Reissue of U.S. Patent No.	:	5,123,001
Issued	:	June 16, 1992
Examiner	:	Unknown
Art Unit	:	Unknown

Commissioner of Patents and Trademarks
Washington, D.C. 20231

OFFER TO SURRENDER

Dear Sir:

The undersigned Applicants of the accompanying Reissue Application of letters patent for **DISK PLAYBACK DEVICE**, U.S. Patent No. 5,123,001, granted to them on June 16, 1993, of which Nakamichi Corporation of Kodairo, Japan, is now sole owner by an assignment recorded on Reel 5468, Frame 0022, and on whose behalf and with whose assent the accompanying application is made, hereby offers to surrender said letters patent.

Filed herewith is an order for a Title Report as required in such applications.

M. Nakamichi

May 16, 1994

Applicant #1

Date

Y. Noguchi

May 13, 1994

Applicant #2

Date

ASSENT OF ASSIGNEE TO REISSUE

The undersigned Assignee of the entire interest in the above-mentioned letters patent hereby assents to the accompanying application.

NAKAMICHI CORPORATION

By Osamu Yamada

Osamu YAMADA,
Corporate Officer and
Director

Date May 17, 1994



1
**REISSUE APPLICATION DECLARATION
AND POWER OF ATTORNEY**

RECEIVED
MAR 07 1995
GROUP 2500

ATTORNEY'S DOCKET NO. M1653-8

We, Niro NAKAMICHI and Yasuhiro NOGUCHI as joint inventors along with Makoto HARA, who refuses to join in this application for a reissue of patent number 5,123,001 and whose last known address is 29-24, Nishi 2-chome, Kunitachi-shi, Tokyo, Japan, do individually and on behalf of Makoto HARA declare that:

Our residences, Post Office addresses and citizenships are stated below next to our respective names.

We believe we are the original, first and sole inventors of the subject matter which is described and claimed in patent number 5,123,001, granted June 16, 1992, and for which a reissue patent is sought on the invention entitled **Disk Playback Device**, the specification of which is was filed on May 27, 1994 as Application Serial Number 08/250,667 and for which an amendment is filed concurrently herewith.

We hereby state that we have reviewed and understand the contents of the above identified specification, including the claims, as amended by the amendment filed concurrently with this declaration.

We acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, section 1.56(a).

We hereby claim foreign priority benefits under Title 35, United States Code Sec. 119 of the foreign application(s) for patent or inventor's certificate listed below, as claimed in the original patent, and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

NATIONAL PROCESSING PROVISIONS

Prior Foreign Application(s) (Number)	(Country)	(Day/Month/Year Filed)	Priority Claimed
1-219071	Japan	26/8/89	Yes
1-219072	Japan	26/8/89	Yes
1-219073	Japan	26/8/89	Yes

We verily believe that the original patent is partly inoperative due to the claims claiming both less and more than patentees had a right to claim in the patent. This belief is based upon the reasons set forth below.

The following errors exist in the claims of issued number 5,123,001.

ERRORS

Claim 1

Claim 1 includes two unnecessary limitations that limit its scope, but which are not required for patentability over the prior art. The first error is the limitation that requires that all transfers of the disk be coupled via the disk-reading position. Claim 1 recites a first disk conveying means that transports disks from a magazine to a disk reading position and a second disk conveying means that transports disks from an access position to the disk reading position. One of the advantages of the invention is that it allows loading of disks directly from the

access to the storage. The disclosure not only enables an apparatus for transporting disks between the access and storage. Actually the preferred embodiment can be defined in terms of transport between the access and the storage without even mentioning the disk reading position. The above limitation is not required in claim 1 to patentably distinguish the prior art and therefore unnecessary so that Applicants have claimed less than they had a right to. Therefore, the inclusion of the first unnecessary limitation in claim constitutes an error.

A second error is the fact that the claims describe transport from the magazine to the disk reading position and from the access position to the disk reading position and, therefore, do not embrace apparatus in which disks are transported to some internal position that is not the disk reading position. That is, the disk is transported from both the magazine and the outside position in straight lines by respective "first" and "second" "disk conveying means" to the "disk-reading position". The specification is enabling of apparatus in which disks are transported to an internal position other than the position in which the disk is read. Defined narrowly, the preferred embodiment actually does this. In the preferred embodiment (again, more narrowly defined than the claims were intended to be interpreted), the disk is not actually read at the internal position to which the disk is transferred in a straight line by the first disk conveying means. It is moved from the internal position, in a direction perpendicular to the straight line and the plane of the disk, to the disk reading position where it is clamped for reading. (See Figure 1 in which the disk reading position is offset in a direction perpendicular

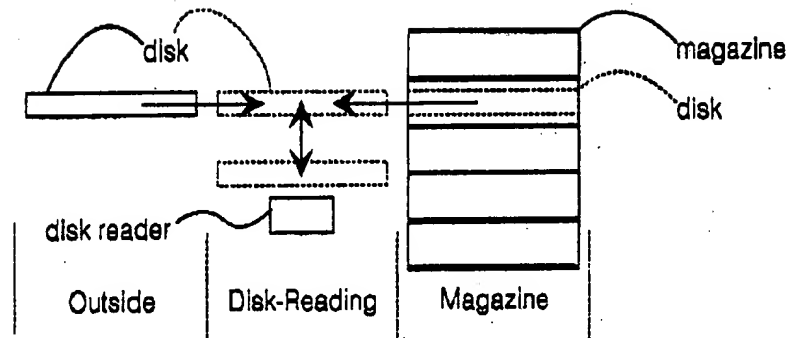


Figure 1

to the line of transport from the outside and from the magazine.) Narrowly defined, the preferred embodiment of the invention, does exactly this. In a strict sense, the disk is not actually transported from the "magazine" to the "disk-reading position" along a "straight line" in "a plane" (the same is true of transport from the "outside" position to the "disk-reading position"). This is because in the preferred embodiment, the disk is moved slightly in a direction perpendicular to the "straight line path" to engage the disk with the disk reader. Applicants do not assert that claim 1 does not read on the preferred embodiment described in the specification, but merely that the arrangement depicted in Fig. 1 above is easily derived based on the specification and is an obvious variant of the claim. This second limitation is not required to patentably distinguish the prior art and therefore constitutes an error.

A third error in claim 1 is the fact that the final clause of claim 1 recites "a selected one of said disks" even though there is antecedent basis earlier in the claim for "selected one said disks". This recitation constitutes a deficit in the specification, of which the claims are a part, and therefore constitutes an error in the claim.

How Errors Arose: In June, 1990, Applicants sent to Prosecuting Attorneys, Morrison Law Firm, three Japanese patent applications on which to base an application for a patent. All of the Japanese patent applications 1-219071,

1-219072, and 1-219073 contained essentially the same disclosure. The drawings were essentially the same as those appearing in the '001 patent and the specification of the Japanese applications described the preferred embodiment also described in the '001 patent. The Japanese claims described the preferred embodiment narrowly. Applicants' Attorneys drafted American claims from scratch. That is, the limitations placed in the broadest claims were supposed to be only those sufficient to distinguish prior art according to American claim practice. Thus, although the claims of the Japanese priority applications had the unnecessary limitations we presently wish to remove, these are not considered to be the error in the American application because the claims drafted by Applicants' American Attorneys were, and were expected to be, drafted freshly along the lines of American practice. Applicants requested Applicants' Attorneys draft an American patent application, including claims, and send it to Applicants for review. The Attorneys complied on August 21, 1990. Applicants sent recommended changes to the Attorneys on August 22, 1990. The changes were mostly editorial. The only changes to the claims related to removing a limitation that required the disk reader to fixedly attached to the chassis.

In the draft that was sent to Applicants on August 21, 1990, claim 1 recited a first disk conveying means but no second disk conveying means. Thus, the first error did not exist in claim 1 at that time. However, the second error of requiring the disk reading position to be a destination position for transport purposes was present in claim 1 from the first filing because claim 1 recited "first disk conveying means for transporting a selected one of said disks from said magazine to said disk-reading position along a straight line path in the plane of said disk". Applicants approved the claims without realizing, due to inadvertence, the consequences of this limitation.

On March 19, 1991, Applicants received a copy of a first office action in the case. On April 11, 1991, Applicants sent instructions for responding to the office action. With regard to the Imai reference (USP 4,797,865- also cited in the

first office action in the present reissue case), Applicants pointed out two important distinguishing features of the invention: (1) the fact that disks to be stored can be moved directly to the playback position without storing them as is required in Imai and the fact that (2) the invention allows disks to be stored automatically from a main tray to the magazine without removing the magazine to load them. Applicants' recommendations also included a proposal for amending claim 1. This amendment of claim 1 included the first error described above. That is, a second disk conveying means was added which transferred disks from the access position to the disk reader. Although Applicants had emphasized in their comments that an important feature of the invention is that it provides for loading disks from the access position to the magazine, the changes Applicants proposed for claim 1 define the invention more narrowly, requiring the means for moving the disk from the access position to move the disk to the disk reading position. At the time, Applicants simply did not appreciate that this difference was significant.

In May of 1991, Applicants' Prosecuting Attorneys filed a first amendment adding a second disk conveying means that transfers a disk from outside to the disk reading position. Note that this claim did not recite the "straight line" limitation of the second disk conveying means of the issued claim 1. Thus, the first error was introduced in the application by this amendment.

A copy of a second office action was sent to Applicants on August 30, 1991. In a letter from Applicants' Attorneys accompanying the copy of the office action, Applicants' Attorneys said "I believe that minor amendment of claim 1 should be sufficient to make claim 1 allowable. The principal difference between our device and the two cited references is that our single-play technique uses a powered transport device which accepts a disk outside the player and transports the disk in a straight line into the player and into a playing position". Thus, although Applicants' Attorneys stated that the disk is accepted outside and brought into the player, they added the limitation that the disk was brought also to the disk player, without distinguishing the separate aspects of (1)

"transport[ing] the disk in a straight line into the player" and (2) "transport[ing] the disk ... into a playing position". The first, "transport[ing] the disk in a straight line into the player" which, in combination with other limitations can patentably distinguish the prior art, comprehends transporting the disk to the storage and transporting the disk to an internal position other than the disk reading position. Thus, the limitations identified with the first and second errors were not necessary to place in the claim, but Applicants and Applicants' Attorneys simply had considered the reading position to be the destination position to which disks, inserted from outside, were transported by the second disk conveying means.

In the second amendment, claim 1 was amended by adding straight-line limitations to the second disk conveying means. The amendment was filed in October of 1991. Clearly, the extra limitations resulting in the first and second errors were added because Applicants and Applicants' Attorneys had failed to appreciate that claim 1 could have been drafted more broadly while still avoiding prior art. This failure to appreciate the scope of claim 1 perhaps resulted in part due to imperfect communication between Applicants' Prosecuting Attorneys and Applicants which stemmed, at least in part, from the difference in their respective languages, which are English and Japanese.

The third error was introduced in claim 1 in the second amendment, filed in October of 1991, and was caused by mere inadvertence of the Prosecuting Attorneys. Applicants' Attorneys had full responsibility to write proposed claims for Applicants. Applicants' Attorneys wrote the amendment to claim 1 shortly before filing it. The amendment with the claims were sent to Applicants, before filing, for review, but Applicants did not notice the error. Neither Applicants, nor Applicants' Attorneys noticed the error following the filing of the second amendment or at any time thereafter.

When and How Errors Were Discovered: Subsequent to the issuance of the patent, in early 1993, Applicants, observing devices being manufactured in the industry, studied the issued patent's claims. Applicants were concerned that the

claims were too narrow and that competitors would be able to take advantage of Applicants' invention without infringing the claims as issued. In February of 1993, Applicants discussed the claims of the issued patent with Applicants' Attorneys, conveying information about a competitor changer mechanism, which they believed should have been covered by the patent. The Applicants asked Applicants' Attorneys to review the competitor changer mechanism to determine if the patent claims covered the competitor device. When the Attorneys could not literally apply claim 1 or any of the other claims to the competitor device, Applicants came to understand that there was a problem with the claims. On February 26, 1993, Applicants, having decided to file a reissue application, wrote to Applicants' Attorneys about it. In their letter, Applicants indicated that a broader claim in which a disk is moved from the outside to the magazine, without specifying a disk reading position, could have been included in the application. Applicants appreciated that it was error that such a claim was not included. In the competitor changer, the disk is brought in from the outside but the internal position to which it is brought is not precisely the position at which the disk is played back. Applicants came to the realization that the first and second errors in claim 1 were present, then, during January and February of 1993 in connection with their analysis of the competitor changer mechanism. Applicants articulated the nature of this error to Applicants' Attorneys in the February 26, 1993 letter. Although the error had not been articulated in precisely the same way as the two errors discussed in the present declaration, Applicants believe they understood that the error, now understood as the first and second errors in claim 1, existed in the claims in February of 1993. Applicants wrote in March 8, 1993, to Applicants' Attorneys that they were designing a disk changer which differed from the preferred embodiment only in that the disk reading position was not the same as the position to which the disk was brought from outside before being loaded into the magazine. Applicants stated that they wanted Applicants' Attorneys to consider this variation because they believed such a device, claimed appropriately,

to be enabled by the specification of the '001 patent. This appreciation came about as Applicants reviewed their designs for a new changer mechanism and as Applicants considered their options, during February and early March of 1993, with regard to the proposed reissue application.

Applicants note that the defective reissue declaration, filed to support the application, referred to the errors as:

A. In claims 1, 2, and 8, unnecessarily reciting "straight line path limitations"

B. In claims 1 and 8 unnecessarily requiring the access position to be "outside" the disk changer.

C. In claims 1, 2, and 8, unnecessarily requiring the magazine be moveable.

D. In claims 1, 2, 5, 7, and 8, unnecessarily requiring the internal position to which disk are transported from the outside and the magazine be the position for reading the disk. (This is the same as the second error in claim 1).

Applicants would like to point out that the first error in claim 1 was not identified as such in the original reissue declaration. Errors A, B, and C were dropped as the basis for the reissue application and the first error, as articulated in the present reissue declaration as an expedient. This is because the original reissue declaration was roundly criticized by the Examiner as failing to specify the errors, how they arose, and how and when they were discovered. The Attorneys in preparing the original declaration misapprehended the difficulty of complying with this requirement and added many new claims whose language departed dramatically from that of the original claims. Applicants now understand that the errors need to be confined in number and the changes in the reissue claims as few as possible to make the specificity requirement of the declaration manageable. Applicants therefore reanalyzed the history of Applicants' analysis and their initial apprehensions about the claims' scopes in an effort to define the errors, and how to fix them, such that the reissue declaration would be manageable.

Changes Proposed to Cure Error in Claim 1: To eliminate the results of the first error, Applicants propose to provide 2 new claims in which the position for playback, the magazine, and the position for access to the disk are interchanged to form the three combinations of which original claim 1 is one. Thus, in original claim 1, the "first disk conveying means" transfers the disk from the "magazine" to the "disk-reading position" and the "second disk conveying means" transfers the disk from "outside" to the "disk-reading position". In new claim 27, the "first disk conveying means" transfers the disk from the "magazine" to the "outside" and the "second disk conveying means" transfers the disk from the "outside" to the "disk-reading position." In new claim 29, the "first disk conveying means" transfers the disk from the "magazine" to the "disk reading position" and the "second disk conveying means" transfers the disk from "outside" to the "magazine."

Support for these variations is in the specification because the preferred embodiment permits transfer of disks in straight line paths between each position, outside, magazine, and disk reading positions.

In addition, claim 1 was amended to fix the third error, an antecedent basis problem in the last clause: the recitation, "to bring a selected one" is amended to read --to bring said selected one--, since "selected one" appears earlier in the claim. Of course, new claims 27 and 29 differ from claim 1 as issued in that they recite "said selected one" instead of "a selected one" in the last clause.

Specifically, the amendment and new claims represent the following departures from original claim 1:

A. In claim 1, final clause, and new claims 27 and 29, the next-to-last clause, "to bring a selected one" is replaced by --to bring said selected one--, as compared to issued claim 1, to fix the third error. It is believed that this change, by itself, does not make the scope different from issued claim 1.

B. In claim 27, the clause in claim 1: "first disk conveying means for transporting a selected one of said disks from said magazine to said disk-reading

position" is replaced by a clause that reads: --first disk conveying means for transporting a selected one of said disks from said magazine to a position outside said disk storage and playback device--. Thus, "said disk reading position" is replaced with --a position outside said disk storage and playback device--. The effect of this is to provide a claim that covers a second alternative combination of the three possible combinations of connecting outside, disk reader, and magazine positions. For example, claim 27 covers the variation where the outside position is located between the disk reading and magazine positions so the disk is transferred from the outside to either the disk reading position or the magazine.

C. In claim 29, the clause in claim 1: "second disk conveying means for transporting a disk ... beginning outside said disk storage and playback device to said disk-reading position" is different from the corresponding clause in claim 1 in that it reads: --second disk conveying means for transporting a disk ... beginning outside said disk storage and playback device to said magazine--. Thus, "said disk reading position" recited in claim 1 is replaced with --a position outside said disk storage and playback device--. The effect of this is to provide a claim that covers the third alternative combination of the three possible combinations of connecting outside, disk reader, and magazine positions. For example, claim 29 covers the variation where the magazine is located between the disk reading and outside positions so the disk is transferred from the magazine to either the disk reading position or the outside position.

The variations of claims 27 and 29 are fully supported by the original specification. Both new claims plainly read on Applicants' preferred embodiment. Again, both new claims are necessary because, as the patent was issued, a competitor could easily circumvent claim 1 merely by rearranging the outside, playback, and magazine positions.

The second problem with claim 1 is proposed to be addressed by adding three new claims, 31, 33, and 35, identical to amended claim 1, and new claims 27 and 29, respectively, except that instead of requiring that the "first and second

disk conveying means" transfer a disk to the "disk-reading position", a --first position--, assumes the role of the "disk-reading position" for transport purposes. Thus, new claims 31, 33, and 35 include the following differences: (1) A first position is defined inside the disk storage and playback device. (2) The new --first position-- is substituted for "disk-reading position" in clauses defining "first" and "second" "disk conveying means" in claims 1, 27, and 29. (3) A means is added for transferring the disk from the first position to the disk reading position. Claims claim 31, 33, and 35, as described above cover embodiments such as the preferred embodiment described in the specification.

The above departures from claims 1, 27, and 29 are necessary to provide for the simple variation where the disk is transported to an internal position that does not coincide precisely with the position in which the disk is played back. As discussed above, Applicants' preferred embodiment, strictly defined, does this, so the modification incorporated in claims 31, 33 and 35 are fully supported by the specification. Specifically, claims 31, 33, and 35 depart from claims 1 as amended, and new claims 27 and 29 in the following respects:

A. A clause is added defining --a first position inside said disk storage and playback device;-- to positively set forth the non-disk reading position.

B. A second clause defining --means for moving said one of said disks from said first position to said disk-reading position-- is added.

C. Every instance of "disk-reading position" in clauses reciting "first" and "second" "disk conveying means" is changed to --first position--.

The above changes are necessary to correct the second error in claim 1 with respect to transfer directly to a disk reading position. The change in scope is not such as to change the nature of the invention or make it unduly broad. In addition, as discussed above, claims 31, 33, and 35 are fully supported by the specification.

Applicants propose to provide new claims 28, 30, 32, 34, and 36 which are identical to claim 4 except that they depend from claims 27, 29, 31, 33, and 35 respectively. Dependent claims are, of course, an important device for insuring a

patent against possible unknown prior art. Applicants having missed the opportunity to provide claims with the breadth of new claims 27, 29, 31, 33, and 35 also missed the opportunity to provide claims, depending from them, with a narrower scope. The error of not providing these claims stems from the same error defined above, that of failing to appreciate the scope of the invention.

Claim 2:

The second error identified in claim 1 also exists in claim 2 (This error is referred to hereafter as the first error of claim 2). That is, claim 2 also defines "first disk conveying means" that transports the disk from an outside position, or from the magazine, to the "disk-reading position" instead of, more generally, an internal position to which the disk can be moved to engage the disk-reader afterwards. As discussed above, this limitation is not necessary in claim 2 for claim 2 to be valid. Unlike claim 1, in claim 2, the "second disk conveying means" does not define a line or plane along which the disk is transported. Thus, for purposes of the "second disk conveying means", it is not considered an error that the claim recites "disk-reading position", as it was in the case of claim 1. Again, the preferred embodiment described in the specification, narrowly defined, already conforms to such a description because the disk is moved slightly off the line of transport of the first disk conveying means to move it exactly to the disk-reading position.

A second error in claim 2 affects its clarity. In claim 2, the recitation "said magazine including means for receiving a plurality of said subframes" is vague and indefinite because it is unclear how the magazine has "means for receiving a plurality of ... disks", the subframes include "means for receiving a single one of said disks" and the magazine includes "means for receiving a plurality of said subframes." This recitation makes claim 2 indefinite and vulnerable to attack as invalid for failing to comply with the requirements of 35 U.S.C. §112 and therefore constitutes an error in the claim.

How Errors Arose: The history of the application which gave rise to the '001 patent is explained above with reference to claim 1 errors. Claim 2 resulted from amendments to claim 4 of the application. The first and second disk conveying means were originally defined in claim 1, as amended, by the first amendment as described above. The limitations defining the first and second disk conveying means were incorporated in claim 4, originally a dependent claim depending from claim 1, to place it in independent form. This was done in the second amendment. Since the error of limiting the invention to a device in which the disk playback position was the destination position of the first disk conveying means (and not some internal positions other than the disk reading position) was present in claim 1 from the first filing, and incorporated in the claim that became claim 2 in the second amendment. Thus, the history of how this error arose is essentially the same as described above with reference to the second error in claim 1. Essentially, Applicants approved the claims without realizing, due to inadvertance, the consequences of this limitation. A copy of a second office action was sent to Applicants on August 29, 1991. Again, the limitation identified with the first error of claim 2 was not necessary to place in the claim, but Applicants and Applicants' Attorneys simply had considered the reading position to be the destination position to which disks, inserted from outside, were transported by the second disk conveying means. Clearly, the extra limitations resulting in the first error of claim 2 were added because Applicants and Applicants' Attorneys had failed to appreciate that claim 1 could have been drafted more broadly while still avoiding prior art. This failure to appreciate the scope of claim 2 perhaps resulted in part due to imperfect communication between Applicants' Prosecuting Attorneys and Applicants which stemmed, at least in part, from the difference in their respective languages, which are English and Japanese.

The second error was introduced in claim 2 in the second amendment, when the limitations of claim 1 were incorporated to place it in independent form. The limitations describing holding the disks in the magazine and the limitations

defining subframes did not fit together in such a way as to produce a clear claim. This error existed with the claims as filed since the limitations all existed in claim 4 of the application, the limitations of claim 1 being incorporated therein by dependency. These errors were caused by mere inadvertence of the Prosecuting Attorneys when they drafted the application. Applicants' Attorneys had responsibility to write proposed the amendments to claims for Applicants. The application with the claims were sent to Applicants for review, but Applicants did not notice the error. Neither Applicants, nor Applicants' Attorneys noticed the error at any time after the filing and before issuance.

When and How Errors Were Discovered: The second error in claim 2 was discovered when Applicants received a copy of the first office action in the present reissue application. The Examiner discovered the error and defined it as described above in the office action mailed on August 24, 1995. A copy of the office action was mailed within two weeks thereafter to Applicants by Applicants' Attorneys, whereupon Applicants learned of the error.

The first error in claim 2 was discovered at precisely the same time and under the same circumstances as the second error of claim 1. They are essentially the same error because the limitation of having the disk reading position serve as the transport destination of the disk conveying means is present in all the claims. Applicants came to the realization that the first error in claim 2 was present, then, during January and February of 1993 in connection with their analysis of the competitor changer mechanism. In addition, Applicants' articulated the nature of this error to Applicants' Attorneys in the February 26, 1993 letter. Although the error had not been understood and articulated in the same way as the first error in claim 2, as described in the present declaration, Applicants believe they understood that the error, now understood as the first error in claim 2, existed in the claims in February of 1993. The error was in fact articulated in substantially the same way by Applicants in March 8, 1993 when Applicants wrote to Applicants' Attorneys that they were designing a disk changer which differed

from the preferred embodiment only in that the disk reading position was not the same as the position to which the disk was brought from outside before being loaded into the magazine. Applicants stated that they wanted Applicants' Attorneys to consider this variation because they believed, claimed appropriately, such a device to be enabled by the specification of the '001 patent. This appreciation came about as Applicants reviewed their designs for a new changer mechanism and as Applicants considered their options, during February and early March of 1993, with regard to the proposed reissue application.

Changes Proposed to Cure Errors in Claim 2: To eliminate the second error in claim 2, claim 2 is amended to add "--, each of said plurality of disks being received in a subframe received by said magazine such that said plurality of disks is aligned-- between "planar disks" and "in a concentric array", and to remove:

"a plurality of subframes, each of said subframes including means for receiving a single one of said disks;

said magazine including means for receiving a plurality of said subframes;"

The effect of these changes is to describe with greater clarity, and perhaps more narrowly, than before, the relationship between the disks, the subframes, and the magazine because that relationship was not made clear in the original version of claim 2. The scope of claim 2 is not substantially changed, except, to the extent that the structural relationship between the three elements, disks, subframes, and magazine has been defined with greater clarity.

To eliminate the results of the first error described above, Applicants propose to add two new claims, claims 37 and 38, which depart to different degrees from issued claim 2. Applicants retain claim 2 as issued because, having failed to recognize that broader coverage of the invention was possible, Applicants missed the opportunity to provide claims with the varied scope of issued claim 2 and new claims 37 and 38. Such variation in scope is important protection against unknown prior art. In the first of the new claims based on claim 2, claim 37, the

recitation of "disk-reading position", in the clause defining "first disk conveying means" is replaced with a --first position--. Other changes are made to interrelate the elements of the claim as required by MPEP §2173.05(k). In the second new claim, claim 38, the first recitation of "said disk-reading position" in the clause defining "first disk conveying means" is not changed. In both claims 37 and 38, the recitation of "whereat a disk carried therein is in said disk-reading position" is deleted because it states that the first position is the same as the disk-reading position. Fewer changes are proposed in new claim 38 so that claim 38 will be narrower, thereby providing a hedge against possible unknown prior art. Such a claim of intermediate scope would be a natural one to add during prosecution, but, because of the error in Applicants' understanding of the scope of issued claim 2, as described above, such a claim was omitted during prosecution. The amendments to claim 2 have been incorporated in claims 37 and 38.

Claim 37, differs from claim 2 in the following respects: (1) --[A] first position inside the disk storage and playback device-- replaces the first recitation of "said disk reading position". (2) The recitation of "whereat a disk carried therein is in said disk-reading position" is deleted because it states that the first position is the same as the disk-reading position. (3) Recitation of: "means for moving said disk from said first position to said disk-reading position" is added to define a functional relationship between the first position and the other the disk changer elements defined in the new claim.

Claim 38, differs from claim 2 in the following respects: (1) The recitation of "whereat a disk carried therein is in said disk-reading position" is deleted because it states that the first position is the same as the disk-reading position. (2) Recitation of: "means for moving said disk from said first position to said disk-reading position" is added to define a functional relationship between the first position and the other the disk changer elements defined in the new claim.

Claims 37 and 38 provide coverage for simple variations where the disk is transported to an internal position that does not coincide precisely with the

position in which the disk is played back. As discussed above, defined strictly, Applicants' preferred embodiment actually does this, so the modification incorporated in claim 2 as amended and new claims 37 and 38 are fully supported by the specification. Specifically, new claims 37 and 38 depart from claim 2, as issued, in the following respects:

(1) The recitation: "a first position inside said disk storage and playback device" replaces the first recitation of "said disk reading position" and --said first position-- replaces the second recitation of "said disk-reading position".

(2) The recitation of "whereat a disk carried therein is in said disk-reading position" is deleted because it states that the first position is the same as the disk-reading position.

(3) Recitation of: "means for moving said disk from said first position to said disk-reading position" is added to define a structural and functional relationship between the first position and the other the disk changer elements defined in the new claim as required in MPEP §2173.05(k).

(4) Recitation of --, each of said plurality of disks being received in a subframe received by said magazine such that said plurality of disks is aligned-- was added between "planar disks" and "in a concentric array", and the following recitation was removed:

"a plurality of subframes, each of said subframes including means for receiving a single one of said disks;

said magazine including means for receiving a plurality of said subframes;"

New claim 38 contains the same changes relative to claim 2 as new claim 37 except for the first (1). That is, the first recitation of "said disk-reading position" is not changed.

The above changes are necessary to correct the errors in claim 2 identified above. The changes in scope are not such as to change the nature of the invention

or make it unduly broad. In addition, as discussed above, claims 37 and 38 are fully supported by the specification.

Applicants also propose to provide new claim 39, depending from claim 38, which is identical to claim 3 (which depends from claim 2, on which claim 38 is based). Dependent claims are, of course, an important device for insuring a patent against possible unknown prior art. Applicants, having missed the opportunity to provide claims with the breadth of new claim 38, also missed the opportunity to provide a claim, depending from claim 38, with a narrower scope. The error of not providing this claim stems from the same error defined above, that of failing to appreciate the scope of the invention.

Claim 5:

The second error identified in claim 1 and the first error identified above in claim 2, is also present in claim 5. Namely, claim 5 also defines a "mainframe ... [movable] between a first position, whereat a disk carried therein is in said disk-reading position, and [an access position]" and "disk conveying means for transporting a selected one of said subframes from said magazine to said main frame when said main frame is in said first position". Thus claim 5 requires the disk position to which a disk is conveyed from the outside and to which a disk is conveyed from the magazine, to be the first position, in this case, defined to be the disk reading position, instead of, more generally, an internal position to which the disk can be moved to engage the disk-reader afterwards. Again, the requirement that the "first position" also be a disk-reading position has the same consequences described above with respect to claims 1 and 2. As discussed above, this error may permit claim 5 to be circumvented easily while still obtaining the benefits of the invention. That is, a device in which a specified position assumes the role of the "disk-reading", for purposes of the "mainframe" and "disk conveying means", would not infringe claim 5.

How Errors Arose: Claim 5, originally claim 9 in the application as filed, was drafted in the final form that issued as claim 5. Thus, the error in claim 5 existed as of the date of filing. The history of the application which gave rise to the '001 patent is explained above with reference to claim 1 errors. The first and second disk conveying means were defined in claim 9 of the application with the error of claim 5 described above. Thus, the history of how this error arose is essentially the same as described above with reference to the second error in claim 1. Essentially, Applicants approved the claims without realizing, due to inadvertence, the consequences of this limitation. A copy of a second office action was sent to Applicants on August 29, 1991. Again, the limitation identified with the error of claim 5 was not necessary to place in the claim, but Applicants and Applicants' Attorneys simply had considered the reading position to be the destination position to which disks, inserted from outside, were transported by the second disk conveying means. Clearly, the extra limitations resulting in this error were added because Applicants and Applicants' Attorneys had failed to appreciate that claim 9 of the application could have been drafted more broadly while still avoiding prior art. This failure to appreciate the scope of claim 9 and the invention perhaps resulted in part due to imperfect communication between Applicants' Prosecuting Attorneys and Applicants which stemmed, at least in part, from the difference in their respective languages, which are English and Japanese.

When and How Errors Were Discovered: The error in claim 5 was discovered at precisely the same time and under the same circumstances as the second error of claim 1 and the first error of claim 2. They are essentially the same error because the limitation of having the disk reading position serve as the transport destination of the disk conveying means is present in all the claims. Applicants came to the realization that the error in claim 5 was present, then, during January and February of 1993 in connection with their analysis of the competitor changer mechanism. In addition, Applicants articulated the nature of this error to Applicants' Attorneys in the February 26, 1993 letter. Although the

error had not been understood and articulated in the same way as the error in claim 5, as described in the present declaration, Applicants believe they understood that the error, now understood as the error in claim 5, existed in the claims in February of 1993. The error was in fact articulated in substantially the same way by Applicants in March 8, 1993 when Applicants wrote, to Applicants' Attorneys that they were designing a disk changer which differed from the preferred embodiment only in that the disk reading position was not the same as the position to which the disk was brought from outside before being loaded into the magazine. Applicants stated that they wanted Applicants' Attorneys to consider this variation because they believed, claimed appropriately, such a device to be enabled by the specification of the '001 patent. This appreciation came about as Applicants reviewed their designs for a new changer mechanism and as Applicants considered their options, during February and early March of 1993, with regard to the proposed reissue application.

Changes Proposed to Cure Error in Claim 5: To eliminate the results of the error in claim 5, Applicants propose to provide a new claim 40 in which any recitation requiring a transport origin or destination position to be the "disk-reading position", is changed to recite a --first position-- only. In addition, Applicants propose to make any other changes in order to insure that the elements of the claim are properly interconnected. The following modifications are made to claim 5 resulting in the proposed new claim 40. (1) In the sixth clause, the recitation of "whereat a disk carried therein is in said disk-reading position" is replaced with "inside said disk storage and playback device". (2) In the eighth clause, the recitation of "operative when said main frame is in said first position" is deleted. The first change is necessitated because the transport destination is defined as both a "first position" and a "disk-reading position". The second change is necessitated because the recitation: "separating said main frame and a subframe received therein from a disk received therein, whereby said disk may be read by said disk reader" also defines the first position as a disk-reading position.

The above departures from claim 5 provide for the simple variation where the disk is transported to an internal position that does not coincide with the position in which the disk is played back. As discussed above, narrowly defined, Applicants' preferred embodiment actually does this, so the modification incorporated in new claim 40 is fully supported by the specification.

The above changes are necessary to correct the error identified with respect to transfer directly to a disk reading position. The change in scope is not such as to change the nature of the invention or make it unduly broad. In addition, as discussed above, new claim 40 is fully supported by the specification.

Applicants propose to retain the original claim 5 because, having failed to recognize that broader coverage of the invention was possible, Applicants missed the opportunity to provide claims with the varied scope of issued claim 5 and new claim 40. This rationale also applies to the missed opportunity to provide a dependent claim for a claim with the scope of new claim 40. Dependent claims are, of course, an important device for insuring a patent against possible unknown prior art. Thus, a new claim 41, identical except for its dependency, to issued claim 6, is also provided in the amendment.

Claim 7:

The common error in claims 1, 2, and 5, namely the requirement that the disk conveying means transport the disk by way of the "disk-reading position", is also present in claim 7. Claim 7 recites a "mainframe ... [movable] between a first position, whereat a disk carried therein is in said disk-reading position and [an access position]" and "disk conveying means for transporting a selected one of said subframes from said magazine to said main ... in said first position". As discussed above, requiring the destination positions to coincide with the disk-reading position is an unnecessary limitation. Again, the preferred embodiment described in the specification already conforms to such a description because the disk is moved slightly off the line of transport between the outside and playback

positions and the magazine and playback positions in order to engage the turntable.

A second error in claim 7, as issued, is that claim 7 provides no antecedent basis for the first recitation of "said mainframe". A third error in claim 7 is that claim 7 ambiguously and ungrammatically refers to "a subframe" in the clause reciting "n-1 of said subframes being received in said magazine when one of a subframes is received in said mainframe". Where claim 7 recited "a subframes", it should have recited "said subframes", since these elements were earlier introduced in the claim. A fourth error in claim 7 is the ungrammatical use of "nondetachable", which should be in the form of an adverb, "nondetachably".

How Errors Arose: Claim 7, originally claim 11 in the application as filed, was drafted in the final form that issued as claim 7. Thus, the first error in claim 7 existed as of the date of filing. The history of the application which gave rise to the '001 patent is explained above with reference to claim 1 errors. The first and second disk conveying means were defined in claim 11 of the application with the first error of claim 7 described above. Thus, the history of how this error arose is essentially the same as described above with reference to the second error in claim 1. Essentially, Applicants approved the claims without realizing, due to inadvertence, the consequences of this limitation. A copy of a second office action was sent to Applicants on August 29, 1991. Again, the limitation identified with the first error of claim 7 was not necessary to place in the claim, but Applicants and Applicants' Attorneys simply had considered the reading position to be the destination position to which disks, inserted from outside, were transported by the second disk conveying means. Clearly, the extra limitations resulting in this error were added because Applicants and Applicants' Attorneys had failed to appreciate that claim 11 of the application could have been drafted more broadly while still avoiding prior art. This failure to appreciate the scope of claim 11, relative to the scope of the invention, perhaps resulted in part due to imperfect communication between Applicants' Prosecuting Attorneys and Applicants which stemmed, at

least in part, from the difference in their respective languages, which are English and Japanese.

The second through fourth errors in claim 7 were caused by mere inadvertence of the Prosecuting Attorneys when they drafted the application. Applicants' Attorneys had full responsibility to write proposed claims for Applicants. The application with the claims were sent to Applicants for review, but Applicants did not notice the error. Neither Applicants, nor Applicants' Attorneys noticed the error at any time after the filing and before issuance.

When and How Errors Were Discovered: The first error in claim 7 was discovered at precisely the same time and under the same circumstances as the second error of claim 1, the first error of claim 2, and the error of claim 5. They are essentially the same error because the limitation of having the disk reading position serve as the transport destination of the disk conveying means is present in all the claims. Applicants came to the realization that the first error in claim 7 was present, then, during January and February of 1993 in connection with their analysis of the competitor changer mechanism. In addition, Applicants' articulated the nature of this error to Applicants' Attorneys in the February 26, 1993 letter. Although the error had not been understood and articulated in the same way as the first error in claim 7 is described in the present declaration, Applicants believe they understood that the error, now understood as the first error in claim 7, existed in the claims in February of 1993. The error was in fact articulated in substantially the same way by Applicants in March 8, 1993 when Applicants wrote, to Applicants' Attorneys that they were designing a disk changer which differed from the preferred embodiment only in that the disk reading position was not the same as the position to which the disk was brought from outside before being loaded into the magazine. Applicants stated that they wanted Applicants' Attorneys to consider this variation because they believed, claimed appropriately, such a device to be enabled by the specification of the '001 patent. This appreciation came about as Applicants reviewed their designs for a

new changer mechanism and as Applicants considered their options, during February and early March of 1993, with regard to the proposed reissue application.

The second and third errors were discovered by Applicants' Attorneys around April of 1994, which is shortly before the reissue application was filed. In the course of routinely reviewing claims of the patent in preparation for filing a reissue application, Applicants' Attorneys discovered the second and third errors.

The fourth error in claim 7 was discovered by Applicants' Attorneys around January 1996. In the course of routinely reviewing claims of the patent in preparation for responding to the first office action in the current reissue application, Applicants' Attorneys discovered the second error.

Changes Proposed to Cure Error in Claim 7: To eliminate the second through fourth errors, minor changes are required. Claim 7 is amended to add "a mainframe" after the third clause, to change "nondetachable" to --nondetachably-- in the second clause, and to change the first recitation of "a subframe" to --said subframe--. New claim 42 is drafted without these errors. To eliminate the results of the first error, Applicants propose to provide a new claim 42 in which all recitation requiring the destination position to be the "disk-reading position", in clauses defining transport of the disk between the magazine and external positions, is changed to define a --first position-- only. In addition, Applicants propose to make any other changes in order to insure that the elements of the claim are interconnected. The following modifications are made to claim 7 resulting in the proposed new claim 42. (1) In the third clause, "nondetachable" is changed to --nondetachably--. (2) A clause reciting --a mainframe-- is added after the third clause. (3) The first recitation of "a subframe" is changed to --said subframe--. (4) "whereat a disk carried therein is in said disk-reading position" is changed to --of said disk storage and playback device--. (5) A clause reciting --means for moving said disk in said mainframe in said first position to said disk-reading position;-- is added before the last clause. The latter provides a structural

and functional relationship between the --first position-- and the rest of the device defined by claim 42, as required by MPEP §2173.05(k). The first change is necessitated because the transport destination is defined as both a "first position" and a "disk-reading position". The second change is necessitated because the recitation: "separating said main frame and a subframe received therein from a disk received therein, whereby said disk may be read by said disk reader" also defines the first position as a disk-reading position.

The above departures from claim 7 provide for the simple variation where the disk is transported to an internal position that does not coincide precisely with the exact position in which the disk is played back. As discussed above, Applicants' preferred embodiment does this, so the modifications incorporated in new claim 42 are fully supported by the specification.

The above changes correct the error identified with respect to transfer directly to a disk reading position. The change in scope is not such as to change the nature of the invention or make it unduly broad. In addition, as discussed above, new claim 42 is fully supported by the specification.

Applicants propose to retain the original claim 7, amended to remove the informalities identified above, because, having failed to recognize that broader coverage of the invention was possible, Applicants missed the opportunity to provide claims with the varied scope of issued claim 7 and new claim 42.

Claim 8:

The common error in claims 1, 2, 5, and 7 is also present in claim 8. That is, claim 8 defines "first disk conveying means" that transports the disk from an outside position, or from the magazine, to the "disk-reading position" instead of, more generally, an internal position to which the disk can be moved to engage the disk-reader afterwards. Again, the preferred embodiment described in the specification already conforms to such a description because the disk is moved slightly off the line of transport of the first disk conveying means. A second error

in claim 8 as issued is that claim 8 includes two recitations of "a substantially straight line" without indicating whether the second recitation pertains to the same "straight line" as the first.

How Errors Arose: The claim that issued as claim 8 in the '001 patent was added to the application as new claim 12 in the second amendment filed on October 11, 1991. The errors identified in claim 8 were both present at that time. The misunderstanding that surrounded the appearance of the second limitation into claim 1, as described above with reference thereto, explains why the extra limitation appears in claim 8 as issued. A letter from Applicants' Attorneys to Applicants explains that new claim 12 was added because "a review of the scope of the claims indicates that we do not have claims directed to the loading and unloading of the magazine without playing disks. Accordingly I have drafted a new independent claim 12 directed toward stocking disks in the magazine..." At the time of this letter, no claims required the disk to be played, only that it was brought to a disk reading position. Claim 8 appears again to have extra limitations that were not corrected because Applicants did not appreciate the narrow scope of claim 8. The history of the application which gave rise to the '001 patent is explained above with reference to claim 1 errors. The first and second disk conveying means were defined in claim 12, added in the second amendment. Thus, the history of how this error arose is essentially the same as described above with reference to the second error in claim 1. Essentially, Applicants' Attorneys failed to appreciate that the disk conveying means did not need to be defined as transporting the disk to a disk reading position rather than a generic internal position. When Applicants' Attorneys were inspired to add a new claim for the reason stated above, Applicants' Attorneys apparently assumed the same connection as that which led to the inclusion of the second error in claim 1. Applicants again approved the claim without realizing, due to inadvertence, the consequences of this limitation.

The second error of claim 8 was caused by mere inadvertence of the Prosecuting Attorneys when they drafted the second amendment shortly before filing it in August of 1990. Applicants' Attorneys had full responsibility to write the claims for Applicants. The application with the claims were sent to Applicants for review, but Applicants did not notice the error. Neither Applicants' nor Applicants' Attorneys noticed the error at any time after the filing of this amendment, so it was not corrected.

When and How Errors Were Discovered: The first error in claim 8 was discovered at precisely the same time and under the same circumstances as the second error of claim 1, the first error of claim 2, the error of claim 5, and the first error in claim 7. They are essentially the same error because the limitation of having the disk reading position serve as the transport destination of the disk conveying means is present in all the claims. Applicants came to the realization that the first error in claim 8 was present, then, during January and February of 1993 in connection with their analysis of the competitor changer mechanism. In addition, Applicants articulated the nature of this error to Applicants' Attorneys in the February 26, 1993 letter. Although the error had not been understood and articulated in the same way as the first error in claim 8 is described in the present declaration, Applicants believe they understood that the error, now understood as the first error in claim 8, existed in the claims in February of 1993. The error was in fact articulated in substantially the same way by Applicants in March 8, 1993 when Applicants wrote to Applicants' Attorneys that they were designing a disk changer which differed from the preferred embodiment only in that the disk reading position was not the same as the position to which the disk was brought from outside before being loaded into the magazine. Applicants stated that they wanted Applicants' Attorneys to consider this variation because they believed, claimed appropriately, such a device to be enabled by the specification of the '001 patent. This appreciation came about as Applicants reviewed their designs for a new changer mechanism and as Applicants considered their options, during

February and early March of 1993, with regard to the proposed reissue application.

The second error was discovered by Applicants' Attorneys around January 1996. In the course of routinely reviewing claims of the patent in preparation for responding to the first office action in the current reissue application, Applicants' Attorneys discovered the fourth error.

Changes Proposed to Cure Errors in Claim 8: To eliminate the second error, minor changes are required. Claim 8 is amended to add --first-- and --second-- prior to the first and second recitations "substantially straight line", respectively. New claim 43 is drafted without the error cured by the above changes. To eliminate the results of the first error, Applicants propose that new claim 43 define the destination position of the "first" and "second" "disk conveying means" be changed from the "disk-reading position" to a --first position--. In addition, Applicants propose to make any other changes in order to insure that the elements of the claim are interconnected. The following modifications are made to claim 8 resulting in the proposed new claim 43. (1) Prior to each of the first and second recitations of "substantially straight line", --first-- and --second-- are inserted respectively. (2) A clause reciting --means for moving said disk from said first position to said disk reader;-- is added before the last clause. The latter provides a structural and functional relationship between the --first position-- and the rest of the device defined by claim 41, as required by MPEP §2173.05(k). (3) The recitation of "said disk reader" in the next-to-last clause of issued claim 8 is changed to read --a first position of said disk storage and playback device--.

The above departures from issued claim 8 provide for the simple variation where the disk is transported from outside the device to an internal position that does not coincide precisely with the exact position in which the disk is played back. As discussed above, Applicants' preferred embodiment does this,

so the modifications incorporated in new claim 43 are fully supported by the specification.

The above changes are believed to be the minimum necessary to correct the error identified with respect to transfer directly to a disk reading position. The change in scope is not such as to change the nature of the invention or make it unduly broad. In addition, as discussed above, new claim 43 is fully supported by the specification.

Applicants propose to retain the original claim 8, amended to remove the informalities identified above, because, having failed to recognize that broader coverage of the invention was possible, Applicants missed the opportunity to provide claims with the varied scope of issued claim 8 and new claim 43. This rationale also applies to the missed opportunity to provide a dependent claim for a claim with the scope of new claim 43. Thus, a new claim 44, identical except for its dependency, to issued claim 9, is also provided in the amendment.

We declare that the above referenced error(s) arose without any deceptive intention.

Power of Attorney: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith:

Thomas R. Morrison, Esq.
Roger S. Thompson, Esq.
George J. Brandt, Jr., Esq.
Mark A. Catan, Esq.
Paul J. Lerner, Esq.
Christopher R. Pastel, Esq.
Alfred W. Froeblich, Esq.
Joseph J. Petrokaitis, Esq.

Registration No: 27,361
Registration No: 29,594
Registration No: 22,021
Registration No: 38,720
Registration No: 27,654
Registration No: 37,694
Registration No: 38,887
Registration No: 38,995

Send Correspondence To:

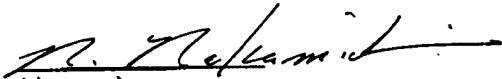
Direct Telephone Calls To:

Thomas R. Morrison, Esq.
MORRISON LAW FIRM
145 North Fifth Ave.
Mount Vernon, NY 10550

Thomas R. Morrison, Esq.
(914) 667-6755

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Inventor's full name: Niro NAKAMICHI
Residence: Tokyo, JAPAN
Address: 2-16-11, Hikawadai
Nerima, Tokyo, JAPAN
Citizenship: Japan


(signature)

February 22, 1996
(date)

Inventor's full name: Yasuhiro NOGUCHI
Residence: Tokorozawa, JAPAN
Address: 2876-25, Yayoi-cho
Tokorozawa, Saitama Pref.
Citizenship: Japan


(signature)

February 22, 1996
(date)

2001-0-0404
445 0-1322